

## Abstract

There are disclosed a natural peptide search in which a template reaction with the nucleus of a minute amount of amyloid  $\beta$ -protein having undergone amyloid fibrosis is induced so as to form amyloid fibers, followed by fiber amount increase and amplification; designing and development of a novel artificial peptide which can be a substitute therefor; a method of amplifying the amyloid fibrosis of amyloid  $\beta$ -protein with the use thereof and a reagent for use therein; and a method of detecting disease caused by amyloidosis and a reagent for use therein. In particular, there are provided a method of amplifying the amyloid fibrosis of amyloid  $\beta$ -protein with the use of a reagent comprising a peptide composed of 14 to 23 residues of amyloid  $\beta$ -peptide or a peptide resulting from substitution of all the positive-charge side chain amino acids of the peptide with Lys and substitution of all the negative-charge side chain amino acids thereof with Glu; a reagent for use therein; a method of detecting disease caused by amyloidosis with the use of a reagent comprising the above peptide; a reagent for use therein; and a novel artificial peptide which can be used therein.